

WHAT WE CLAIM IS:

1. An interposer for a land grid array (LGA) forming electrical interconnect structure between electronic components, said interposer comprising at least one generally pure dielectric elastic contact button, and an electrically-conductive material being disposed on the exterior of said at least one contact button providing said electrical interconnect.
2. An LGA interposer as claimed in Claim 1, wherein said dielectric elastic forming said at least one contact button comprises siloxane.
3. An LGA interposer as claimed in Claim 1, wherein said electrically-conductive material comprises a metal.
4. An LGA interposer as claimed in Claim 3, wherein said metal is selected from the group of materials consisting of nickel, titanium alloy, copper or gold and other metals.
5. An LGA interposer as claimed in Claim 3, wherein said metal comprises a continuous shell of electrical-conductive material covering the external surface of said at least one elastic contact button.
6. An LGA interposer as claimed in Claim 3, wherein said metal comprises an intermittent pattern of electrically-conductive material deposited on the external surface of said at least one elastic contact button.
7. An LGA interposer as claimed in Claim 1, wherein an interposer carrier sheet is arranged between said electronic components, said carrier sheet including at least one metallized through-hole, and said interposer contact being docked in said metallized

through-hole to provide an electrical contact therewith between said electronic components.

8. An LGA interposer as claimed in Claim 7, wherein said interposer carrier sheet includes an array of said metallized through-holes each being equipped with respectively one of said interposer contact buttons.

9. An LGA interposer as claimed in Claim 5 or 6, wherein said contact button is metallized on the external surface through vacuum evaporation or vacuum sputtering of metal on said surface while a physical mask is in contact with the surface of the LGA.

10. An LGA interposer as claimed in Claim 5 or 6, wherein said contact button is metallized by electroless plating of metal in a plating solution, said plating being implemented on only the external surface of said contact button.

11. An LGA interposer as claimed in Claim 8, wherein each of said through-holes is premetallized so as to electrically contact the metallized external surface portions of each of the respective contact buttons which are docked in said through-holes.

12. An LGA interposer as claimed in Claim 11, wherein said premetallization of each of said through-holes forms a metal ring on opposite surfaces of said carrier sheet concentrically extending about each said through-hole connected to the metallized wall surface of each respectively associated through-hole.

13. An LGA interposer as claimed in Claim 6, wherein said metallization pattern is precluded from a center hole extending through the contact button to provide an optical window facilitating optical signal transmission therethrough.

14. An LGA interposer as claimed in Claim 7, wherein said carrier sheet is constituted of a plastic material.
15. An LGA interposer as claimed in Claim 14, wherein said plastic material comprises polyimide.
16. A method of fabricating an interposer for a land grid array (LGA) forming electrical interconnect structure between electronic components, comprising: providing an interposer including at least one generally pure dielectric elastic contact button, and forming an electrically-conductive material on the exterior of said at least one contact button for providing said electrical interconnect.
17. A method of fabricating an LGA interposer as claimed in Claim 16, wherein said dielectric elastic forming said at least one contact button comprises siloxane.
18. A method of fabricating an LGA interposer as claimed in Claim 16, wherein said electrically-conductive material comprises a metal.
19. A method of fabricating an LGA interposer as claimed in Claim 18, wherein said metal is selected from the group of materials consisting of nickel, titanium alloy, copper or gold and the like metals.
20. A method of fabricating an LGA interposer as claimed in Claim 18, wherein said metal comprises a continuous shell of electrical-conductive material covering the external surface of said at least one elastic contact button.

21. A method of fabricating an LGA interposer as claimed in Claim 18, wherein said metal comprises an intermittent pattern of electrically-conductive material deposited on the external surface of said elastic contact button.

22. A method of fabricating an LGA interposer as claimed in Claim 16, wherein an interposer carrier sheet is arranged between said electronic components, said carrier sheet including at least one metallized through-hole, and said interposer contact being docked in said metallized through-hole to provide an electrical contact therewith between said electronic components.

23. A method of fabricating an LGA interposer as claimed in Claim 22, wherein said interposer carrier sheet includes an array of said metallized through-holes each being equipped with respectively one of said interposer contact buttons.

24. A method of fabricating an LGA interposer as claimed in Claim 20 or 21, wherein said contact button is metallized on the external surface through vacuum evaporation or vacuum sputtering of metal on said surface while a physical mask is in contact with the surface of the LGA.

25. A method of fabricating an LGA interposer as claimed in Claim 20 or 21, wherein said contact button is metallized by electroless plating of metal in a plating solution, said plating being implemented on only the external surface of said contact button.

26. A method of fabricating an LGA interposer as claimed in Claim 23, wherein each of said through-holes is premetallized so as to electrically contact the metallized external surface portions of each of the respective contact buttons which are docked in said through-holes.

27. A method of fabricating an LGA interposer as claimed in Claim 27, wherein said premetallization of each of said through-holes forms a metal ring on opposite surfaces of said carrier sheet concentrically extending about each said through-hole connected to the metallized wall surface of each respectively associated through-hole.

28. A method of fabricating an LGA interposer as claimed in Claim 21, wherein said metallization pattern is precluded from a center hole extending through the contact button to provide an optical window facilitating optical signal transmission therethrough.

29. A method of fabricating an LGA interposer as claimed in Claim 22, wherein said carrier sheet is constituted of a plastic material.

30. A method of fabricating an LGA interposer as claimed in Claim 29, wherein said plastic material comprises polyimide.